

What is claimed is:

1. A communication device comprising:

a master microprocessor;

a security identity module operably connected to the master
microprocessor through a bus;
- 5 a buffering device operable to communicate with said master
microprocessor,

wherein said master microprocessor is operable to receive messages from
the buffering device or the security identity module.
2. A communication device as set forth in claim 1, further
comprising:

a message entry device operable to provide said buffering device with a
free-hand drawn message entered by a user with said message entry device.
3. A communication device as set forth in claim 1, further
comprising:

a character recognition device operable to recognize handwritten
characters provided in said messages and convert the hand written characters into
5 text.

4. A communication device as set forth in claim 1, wherein said buffering device comprises:

a quantizer operable to transform each of said messages into a collection of quantized messages

5. A communication device as set forth in claim 4, wherein said buffering device further comprises:

a memory module operable to store said messages; and

an encoder operable to encode said messages prior to transmitting them.

6. A communication device as set forth in claim 1, wherein said bus is defined by GSM standard 11.11.

7. A communication device as set forth in claim 1, wherein said buffering device is operably connected to said bus between the master microprocessor and the security identity module.

8. A communication device as set forth in claim 1, wherein said communication device is compatible with GSM (Global System for Mobil Communication) standards.

004553 072701
T0220 895460

9. A communication device as set forth in claim 1, wherein said communication device is a GSM telephone.

10. A communication device as set forth in claim 1, wherein said communication device is a PDA (Personal Digital Assistant).

11. A communication device as set forth in claim 1, wherein said communication device is a wireless device.

12. A communication device as set forth in claim 5, wherein said buffering device further comprises:

a decoder operable to decode received messages.

13. A communication device as set forth in claim 2, wherein said message entry device comprises:

a free-hand writing area in which said free-hand drawn message can be entered.

14. A communication device as set forth in claim 13, wherein said message entry device further comprises:

a create portion operable to place said communication device in a free-hand message entry mode when activated; and

- 5 a save portion operable to store said free-hand drawn message into said buffering device.

15. A communication device as set forth in claim 2, wherein said free-hand drawn messages comprise handwritten text, hand-drawn pictures, or both.

16. A communication device as set forth in claim 15, wherein said message entry device comprises:

- a text included portion operable to notify the master microprocessor that an optical character recognition function should be performed on the free-hand
5 drawn message; and

a language portion operable to notify the master microprocessor that the optical character recognition facility to be performed is different than a default language associated with the communication device.

17. A GSM compatible communication device comprising:

- a master microprocessor;
- a security identity module operably connected to the master microprocessor through a bus, said security identity module comprising a
5 memory portion and a slave microprocessor; and

a buffering device operable to communicate with said master
microprocessor and said slave microprocessor,

wherein said buffering device is further operable to receive standard SMS
messages input using a keypad on the communication device and free-hand
10 created messages input using a free-hand compatible data entry device.

18. A GSM compatible communication device as set forth in claim 17,
wherein said free-hand created messages can be transmitted as an SMS message,
a facsimile message or an e-mail message.

19. A method for creating and sending SMS messages, said method
comprising:

inputting a free-hand message to a GSM compatible communication
device;

5 storing said free-hand message in a buffering device within said GSM
compatible communication device;

processing said free-hand message to be compatible with standard SMS
message standards; and

transmitting the processed free-hand message.

20. A method for creating and sending SMS messages as set forth in
claim 19, said method further comprising:

performing optical character recognition on said free-hand message.

21. A method for creating and sending SMS messages as set forth in claim 19, said method further comprising:

determining whether an SMS message being entered into said GSM compatible communication device is a standard SMS message or a free-hand
5 drawn SMS message; and

processing said SMS message being entered with said buffering device if it is determined that said SMS message is a free-hand drawn message.

22. A method for creating and sending an SMS message from a GSM compatible communication device, said method comprising:

activating a message create function on said communication device, wherein said message create function is associated with a free-hand drawn
5 message input device;

entering a free-hand drawn message using said free-hand drawn message input device;

activating a message ready function on said communication device indicating that message entry is complete;

10 storing the free-hand drawn message in a buffering device; and

quantizing the stored message into a set of sub-messages each with a predetermined maximum size.

23. A method as set forth in claim 22, further comprising:

indicating whether the free-hand drawn message entered using said free-hand drawn message input device contains text; and

performing optical character recognition on said entered message if said
5 entered message contains text.

24. A method as set forth in claim 23, wherein said optical character recognition is performed within said GSM compatible communication device.

25. A method as set forth in claim 23, wherein said optical character recognition is performed within a network server external from said GSM compatible communication device.

26. A method as set forth in claim 23, further comprising:

if the free-hand drawn message includes text, indicating a language associated with the text;

performing said optical character recognition on said text in the language
5 indicated.

27. A method as set forth in claim 22, further comprising encoding said quantized message.

28. A method as set forth in claim 27, further comprising:

sending said encoded free-hand message from said communications device to a messaging service center;

relaying the encoded free-hand message from said messaging service center to a free-hand messaging server;

decoding said encoded free-hand message; and

forwarding said decoded free-hand message from said free-hand messaging server to said messaging service center; and

forwarding said decoded free-hand message from said messaging service center to an intended recipient.

29. A method for receiving an SMS message from a communication device, said method comprising: receiving an encoded free-hand drawn SMS message from a free-hand messaging server;

transferring said encoded free-hand drawn SMS message to a buffering device operably connected to a microprocessor and a security identity module;

decoding said encoded free-hand drawn SMS message in said buffering device.

00015563-072704

30. An SMS message transmission system comprising:

a plurality of user devices capable of sending and/or receiving SMS
messages;

at least one base station operable to receive SMS messages from said user
5 devices;

a network connected to the one or more base stations operable to process
free-hand drawn SMS message sent from a sender user device and route the free-
hand drawn SMS message to an intended recipient user device.

31. An SMS message transmission system as set forth in claim 30,
wherein said network comprises:

a mobile switching center;

a short message service center operable to process standard SMS
5 messages; and

a free-hand messaging server operable to process SMS messages created
using free-hand drawing or writing.

32. An SMS message transmission system as set forth in claim 31,
wherein said free-hand messaging server comprises an OCR portion operable to
perform optical character recognition on said free-hand drawn SMS messages.

33. An SMS message transmission system as set forth in claim 31,
wherein said free-hand messaging server comprises:

a short message service center interface portion operable to interface said
free-hand messaging server with said short message service center;

5 a concatenation module operable to concatenate said free-hand drawn
SMS messages into messages having a predetermined maximum length; and

a decoding module operable to decode said free-hand drawn SMS
messages.

34. A communication device comprising:

a data entry device operable to enter a free-hand drawn message;

a first conversion device operable to convert said free-hand drawn
message into a message of a different format

35. An SMS message transmission system as set forth in claim 33, further
comprising a signature authentication module operable to receive and store
baseline user signatures and use the stored baseline signatures to authenticate
signatures presented over the network.

36. A method for providing a digital signature, said method comprising:

entering a baseline signature on a mobile device using a free-hand drawn
SMS the baseline signature on a free-hand signature server;

authenticating a subsequent signature received by said free-hand signature
5 server by determining whether said subsequent signature was drawn by the
mobile user who entered the baseline signature.

37. A method as claimed in claim 36, further comprising:

having said mobile user enter a previously provided code to identify the
baseline signature with the mobile user.

38. A device as claimed in claim 34 further comprising:

a quantizer operable to divide said free-hand drawn message into a
plurality of sub messages.

39. A device as claimed in claim 34 further comprising:

a second conversion device operable to convert text portions of said free-
hand drawn message into ASCII characters.

40. A device as claimed in claim 39 wherein said second conversion
device is further operable to receive a language command from said data entry
device and further convert said free-hand drawn message into a language
corresponding to said language command.

41. A device as claimed in claim 34, wherein said communication device is a GSM compatible device and said first conversion device is located within said GSM compatible device.

42. A device as claimed in claim 41, wherein said first conversion device is operably connected to a SIM connector, wherein said SIM connector complies with GSM standard 11.11.

43. A network server comprising:
an interface module operable to receive free-hand drawn messages from a short messaging service center; and
a decoder operable to decode said free-hand drawn messages.

44. A network server as claimed in claim 43, further comprising:
a concatenation module operable to generate a full message from a plurality of concatenated free-hand drawn messages.

45. A network server as claimed in claim 44, further comprising:
a handwriting recognition module operable to convert said free-hand drawn messages into ASCII characters.

46. A communication device as claimed in claim 34, wherein said different format is a standard SMS format.

47. A message transmission system 31, wherein said free-hand messaging server comprises:

a short message service center interface portion operable to interface said free-hand messaging server with said short message service center;

5 a concatenation module operable to concatenate said free-hand drawn SMS messages into messages having a predetermined maximum length; and

a decoding module operable to decode said free-hand drawn SMS messages.

48. A message transmission system comprising:

a plurality of user devices capable of sending and/or receiving messages;

at least one base station operable to receive said messages from said user devices;

5 a network connected to the one or more base stations operable to process free-hand drawn message sent from a sender user device and route the free-hand drawn message to an intended recipient user device; and

10 a signature authentication module operable to receive and store baseline user signatures and use the stored baseline signatures to authenticate signatures presented over the network.

49. A communication device comprising:

a receiving portion operable to receive a message;

a first conversion device operable to convert said message into a free-hand drawn message.

50. A communication device as claimed in claim 49, wherein said message received by said receiving portion is a standard SMS message.

51. An message transmission system as claimed in claim 30 wherein said user devices comprise mobile devices and desktop computers.

52. An message transmission system as claimed in claim 30 wherein said SMS messages are generated using a computer program.